

What Is Claimed Is:

1. A spectrometer wherein the light under measurement is spectrally divided by transmitting the components thereof at different, wavelength-by-wavelength angles using a chromatic dispersion device, and said light under measurement thus spectrally divided by said chromatic dispersion device is received and detected by an optical detector, wherein said spectrometer comprises a refractive index compensation means for compensating changes in the angle at which said chromatic dispersion device transmits said light under measurement, according to changes in the refractive index of the medium in which said chromatic dispersion device is placed.

2. The spectrometer of claim 1, wherein said refractive index compensation means is made integral with said chromatic dispersion

device across the diffracting plane thereof and said light under measurement almost perpendicularly enters said refractive index compensation means and the components of said light under measurement spectrally divided by said chromatic dispersion device are almost perpendicularly transmitted from said refractive index compensation means.

3. The spectrometer of claim 1, wherein said refractive index compensation means is provided in a specific position on the optical path before the point at which said light under measurement is received by said optical detector, and deflects and transmits said light under measurement input therewith.

4. The spectrometer of claim 1, 2 or 3, wherein said refractive index compensation means is a prism.

5. An optical spectrum analyzer for determining the wavelengths of the light under measurement from an output from the optical detector of a spectrometer as claimed in claim 1, 2, 3 or 4.

6. An optical spectrum analyzer wherein the light under measurement is spectrally divided by transmitting the components thereof at different, wavelength-by-wavelength angles using a chromatic dispersion device, said light under measurement thus spectrally divided by said chromatic dispersion device is received by an optical detector, and a wavelength calculation means determines the wavelengths of said light under measurement by means of an output

from said optical detector, wherein said optical spectrum analyzer comprises a calibration unit for correcting wavelengths determined by said wavelength calculation means according to the refractive index of the medium in which said chromatic dispersion device is placed.

7. The optical spectrum analyzer of claim 6, wherein said

calibration unit comprises:

calibration data memory means for storing correcting values for wavelengths at a desired refractive index; and wavelength calibration means for reading said correction values from said calibration data memory means to correct wavelengths determined by said wavelength calculation means.

8. The optical spectrum analyzer of claim 6, wherein said

calibration unit comprises:

calibration data memory means for storing correcting values for

wavelengths;

calibration data calculation means for determining correction

values from the refractive index of the medium in which said

chromatic dispersion device is placed and storing said correction

values in said calibration data memory means; and

wavelength calibration means for reading said correction values

from said calibration data memory means to correct wavelengths

determined by said wavelength calculation means.

9. The optical spectrum analyzer of claim 8, further comprising

refractive index calculation means for determining the refractive

index of the medium in which said chromatic dispersion device is placed from the environment of use, and outputting said refractive index thus determined to said calibration unit.

10. The optical spectrum analyzer of claim 9, further comprising environment measurement means for measuring the environment of use, and outputting the results of measurement to said refractive index calculation means.

11. The optical spectrum analyzer of claim 9 or 10, wherein said the environment of use includes at least one factor of an air composition, an altitude above ground, sea level, atmospheric pressure, temperature, relative humidity, or steam pressure.

12. The optical spectrum analyzer of claim 10, wherein said environment measurement means is an altimeter.

13. The optical spectrum analyzer of claim 10, wherein said environment measurement means is a GPS.

14. The optical spectrum analyzer of claim 6, 7, 8, 9; 10, 11, 12. or 13, wherein said chromatic dispersion device is a diffraction grating or a prism.